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ABSTRACT

This annotated bibliography includes a listing of programs and program information concerning apprenticeship, as well as apprenticeship-related curriculum materials. Included are materials that cover strategies for linking vocational education to apprenticeship and a series of books devoted to apprenticeship instructor training. The curriculum materials are competency based and may be used by teachers of regular and disadvantaged students. Materials for inclusion in this bibliography were located through the Florida Educational Information Service, which conducted searches of computerized information retrieval systems, specifically: the ERIC (Educational Resources Information Center) database on DIALOG and the VECM (Vocational Educational Curriculum Materials) database on BRS (Bibliographic Retrieval Service). Each entry includes title, date, name and address of developer, series title if any, format, and availability. (KC)

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ED309307

Apprenticeship

A Bibliography

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Apprenticeship

A Bibliography

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

Division of Vocational, Adult, and Community Education

December 1988

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Introduction

This bibliography includes a listing of programs and program information, as well as apprenticeship-related curriculum materials. There are materials that cover strategies for linking vocational education to apprenticeship and a series of books devoted to apprenticeship instructor's training. The curriculum materials are competency-based and may be used by teachers of regular and disadvantaged students.

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FEIS is sponsored by the Florida Division of Vocational, Adult, and Community Education and is located in the Center for Instructional Development and Services, Florida State University.

For additional search information, contact Florida Educational Information Service, Center for Instructional Development and Services, 2003 Apalachee Parkway, Suite 301, Tallahassee, FL 32301-4829, (904) 487-2054.

Notes for reading an entry. The records listed in this bibliography have been selected and reproduced as written by data base developers. No further editing of the texts was done.

Microfiche copies of ERIC documents are available through FEIS. To order these microfiche documents, use the order number found in the "Availability" field of certain entries. Microfiche documents may be ordered at a cost of 30 cents per sheet. Each sheet contains up to ninety-six pages of printed copy.

TITLE: ***Alternance Training in Texas: A Preliminary Overview.***

DATE: 1987

AUTHOR: Glover, Robert W.; Shelton, Elaine

DEVELOPER: Texas Coll. and Univ. System, Austin. Coordinating Board.

ANNOTATION: A study was undertaken to identify and evaluate state-of-the-art practices in alternance training used in community and junior colleges and technical institutes throughout Texas. Various arrangements combining alternating periods of study and work, including apprenticeships, cooperative education, internships, clinical experience, and practicums, were examined. Community colleges and technical institutes across Texas were surveyed by telephone to identify all programs that offered a work site component as part of their regular curriculum during the 1986-87 academic year. More specific information regarding the programs was then collected from a survey mailed to all heads of programs with a work site component. Almost 40 percent of the 1,998 programs of postsecondary technical and vocational education offered a work site component as part of their training. Cooperative education was the most common type of work site training (accounting for 335 programs, or 43 percent). Students were paid wages in about half of all programs. In clinical programs, however, payment of wages to learners has been prohibited since 1973. Every campus originally surveyed had at least one work site training program. However, educational practices varied widely among individual programs, and there was little communication or agreement on terms among practitioners associated with different programs. Appendixes include the survey forms used for the Phase 1 Telephone Survey and Phase 2 Mail Survey and the preliminary interview guide that is to be used for the Phase 3 Field Visits.

FORMAT: Research Report; 34p.

AVAILABILITY: For a microfiche copy of this document order ED285010 from FEIS.

TITLE: ***Apprentice Machine Theory Outline.***

DATE: 1982

DEVELOPER: Connecticut State Dept. of Education, Hartford. Div. of Vocational-Technical Schools.

ANNOTATION: This volume contains outlines for 16 courses in machine theory that are designed for machine tool apprentices. Addressed in the individual course outlines are the following topics: basic concepts; lathes; milling machines; drills, saws, and shapers; heat treatment and metallurgy; grinders; quality control; hydraulics and pneumatics; electro-discharge machines; numerical control; dies and their design; eyelets; screw machines; mold construction; bore mills; and jig borers and grinders. Each outline includes a unit objective. Concluding the guide is a list of recommended texts designed to serve as basic course texts or to supplement the basic course texts and brief descriptions of the contents of this series of courses as well as of the contents of two other series of courses—math and blueprint reading—that are also designed for machine tool apprentices.

FORMAT: Teacher Guide; 66p.

AVAILABILITY: For a microfiche copy of this document order ED251671 from FEIS.

TITLE: ***Apprentice Machinist.***

DATE: 1981

DEVELOPER: U.S. Department of Defense, Washington, D.C.

ANNOTATION: Military curriculum project. Air Force correspondence course consists of four volumes of instructional text and four workbooks. Each volume contains a series of lessons and a bibliography. Each workbook includes a study reference guide, review exercises, and answers. Topics covered are machine shop fundamentals, lathe work, shaper and contour machine work, and milling and grinding machine work. AFSC 42730.

FORMAT: Evaluation Instrument; Learning Module; Workbook; Competency-based; Behavioral Objectives; Individualized; Self-paced; Programmed Instruction; Illustrated; 491p.

AVAILABILITY: For a microfiche copy of this document order ED265360 from FEIS.

TITLE: ***Apprentice Machinist* (AFSC 53130), Volumes 1-4,** and ***Change Supplement* (AFSC 42730).**

DATE: 1981

DEVELOPER: Air Univ., Gunter AFS, Ala. Extension Course Inst.

ANNOTATION: This four-volume student learning package is designed for use by Air Force personnel enrolled in a self-study extension course for apprentice machinists. The package consists of four volumes of instructional text and four workbooks. Covered in the individual volumes are machine shop fundamentals, lathe work, shaper and contour machine work, and milling and grinding machine work. Each volume in the set contains a series of lessons and a bibliography. Each workbook includes a study reference guide, chapter review exercises and their answers, and a volume review exercise. A change supplement, containing revised pages for Volume 1 and pen and ink changes for Volumes 1-4, is also provided.

FORMAT: Evaluation Instrument; Learning Module; Workbook; Competency-based; Behavioral Objectives; Individualized; Self-paced; Programmed Instruction; Illustrated; 491p.

AVAILABILITY: For a microfiche copy of this document orderr ED265360 from FEIS.

TITLE: ***"Apprenticeship."***

JOURNAL: *Occupational Outlook Quarterly*; v27 n4 p18-30 Win 1983

ANNOTATION: Provides general information about apprenticeships, including a definition of the term, reasons for becoming an apprentice, how to select a trade, how to qualify for a program, and resources for further information.

SERIES: **Apprenticeship Instructor Training**

TITLE: ***Communicating with Apprentices.***

Controlling Instructional Settings

Developing Instructional Materials for Apprentices.

Directing Learning Activities for Instruction.

Evaluating Apprentice Performance.

Introduction to Related Subjects Instruction and Inservice Training Materials.

Planning Related Subjects Instruction.

Planning the Apprenticeship Program.

Presenting Information to Apprentices.

Providing for Individual Learner Needs.

DATE: 1982

DEVELOPER: Conserva, Inc., Raleigh, N.C.

ANNOTATION: Ten apprenticeship instructor training modules.

FORMAT: Teaching Guides; Learning Modules; Individualized; Self-paced; 33p. each.

AVAILABILITY: Loan 2 weeks; Librarian, Southeast Curriculum Coordination Network, P.O. Drawer DX, Mississippi State, MS 39762; (601) 325-2510.

TITLE: ***Apprenticeship in the 80's: A Training Program for the Bureau of Apprenticeship and Training.***

DATE: 1985

DEVELOPER: Employment and Training Administration (DOL), Washington, D.C.

ANNOTATION: This training package is designed for use by staff of the U.S. Bureau of Apprenticeship and Training who are participating in a course dealing with apprenticeship in the future. Addressed in the individual units of the course are the following topics: employment trends of the future (computers, robotics, communications, growth and declining occupations, future employment projections, and the effects of each of these factors on apprenticeship); apprenticeship training; job analysis; modular training; computer-based training; and marketing apprenticeship (using techniques of marketing and marketing campaigns, conducting a briefing, performing a cost/benefit analysis, and researching). Each unit is subdivided into a series of modules containing reference materials (the content of the course lectures, supplementary articles, bibliographies, and sources of further information), exercise materials, and an apprentice training resource guidebook (charts, forms, and summaries of the most important information from the module). The final section of the package is designed for use as an on-the-job desk guide.

FORMAT: Student Guide/Workbook; 385p.

AVAILABILITY: For a microfiche copy of this document order ED255715 from FEIS.

TITLE: ***Apprenticeship Lessons from Abroad.* Information Series No. 305.**

DATE: 1986

AUTHOR: Glover, Robert W.

DEVELOPER: Office of Vocational and Adult Education (ED), Washington, D.C.

ANNOTATION: This publication reviews available literature regarding apprenticeship in the United States and 17 other industrialized market-economy nations. It notes outstanding practices that may be replicated or transferred to strengthen U.S. apprenticeship. The publication begins by defining apprenticeships and outlining the unique features of U.S. apprenticeship, citing both its strengths and deficiencies. In the remainder of the work attention is given to improvements in seven deficiencies of U.S. apprenticeship: variable quality of training offered; inadequacies in the administration of apprenticeship; inadequate numbers trained; concerns about the cost effectiveness of apprenticeship; inadequate financing for certain apprenticeship programs; limited access to apprenticeships; and unclear role and relationship to other training. Promising practices are detailed that may help remedy the problems identified. Recommendations regarding the transferability of practices are suggested, including broader training; regular curriculum review and updating; development of trade examinations; establishment of a resource center; federal leadership; adoption of a system of Industrial Training Boards; recruitment of women; promotion of alternate training; and collaboration between vocational education and apprenticeship. The paper calls for communication and dialogue with other industrialized countries on the subject of apprenticeship and industrial training. Nine pages of references conclude the report.

FORMAT: Information Analyses; 66p.

AVAILABILITY: For a microfiche copy of this document order ED268374 from FEIS.

TITLE: ***Apprenticeship Programs and Cooperative Vocational Education: Can They Work Together for Special Needs Students?* Technical Assistance Services: Illinois Special Needs Populations.**

DATE: 1983.

AUTHOR: Cobb, R. Brian; Larkin, Dave.

DEVELOPER: Illinois State Board of Education, Springfield. Dept. of Adult, Vocational and Technical Education.

ANNOTATION: Apprenticeship is primarily a training activity, is administered by the United States Department of Labor, and is probably the oldest systematic form of employment preparation for youth in this country. Cooperative education (CWE), on the other hand, has as its focus an education (versus "training") philosophy, is administered by the Department of Education, and is one of the newest forms of occupational preparation that has been established in secondary and postsecondary schools. Although both of these programs serve students, apprenticeship programs have been inaccessible to women, minorities, and handicapped persons; vocational CWE, while more accessible, also has not met the needs of disabled students. Both for serving all youth and for helping special needs students, some changes should be made in these programs. Recommended changes include the following: (1) both programs should allow for earlier entrance ages based on individual needs; (2) junior and community colleges should be supported in efforts to begin CWE/apprenticeship programs articulated with similar programs on the secondary level; (3) various alternative programs for both apprenticeships and CWE should be tried on a community-to-community basis; and (4) both

secondary and postsecondary schools need to be encouraged and reinforced for placing students in work environments depending upon individual requirements (special needs students should be included).

FORMAT: Information Analyses. 17p.

AVAILABILITY: For a microfiche copy of this document order ED227276 from FEIS.

SERIES: **Apprenticeship Related Instruction: A Basic Core Curriculum.**

TITLE: ***Basic Mathematics.***

Basic Measurement.

Basic Physical Science.

Basic Safety I.

Basic Safety II.

Interpersonal Skills and Communication.

Introduction to Apprenticeship.

Sketching, Drawing, and Blueprint Reading.

Working in Organizations.

DATE: 1982.

DEVELOPER: Conserva Inc., Raleigh, N.C.

ANNOTATION: Ten volumes in Apprenticeship Related Instruction. These publications can be used in conjunction with the Apprenticeship-Instructor Training Modules 1-10.

FORMAT: Teaching Guide; Learning Module; Individualized; Self-paced; Illustrated; 15-37pp.

AVAILABILITY: Loan 2 weeks. Librarian, Southeast Curriculum Coordination Network, P.O. Drawer DX, Mississippi State, MS 39762. (601) 325-2510.

TITLE: ***Apprenticeship Training and Vocational Education.***

DATE: 1984.

AUTHOR: Worthington, Robert M.

ANNOTATION: A recent study concluded that the requirements for the completion of apprenticeship training programs should be based on competence rather than the period of participation in the programs. If providers of apprenticeship training programs are to be able to follow this recommendation and to effect other changes in the structure of apprenticeship training programs that have become necessary as a result of recent technological, demographic, and economic changes, then a strong collaborative partnership must be maintained between the vocational education and private sectors. The two sectors must provide joint support for the following: research and development, demonstration projects and activities, curriculum development and related instruction, and apprenticeship school linkage activities. In 1983, the U.S. Department of Education implemented several important projects in the areas of improvement of related instruction in apprenticeship training and improvement of linkages between vocational education and organized labor in the United States. Moreover, the new federal legislation, the Carl D. Perkins Vocational Education Act of 1984, contains several provisions geared toward improving the linkages and collaboration between apprenticeship and vocational education.

FORMAT: Opinion Papers. 18p.

AVAILABILITY: For a microfiche copy of this document order ED254669 from FEIS.

TITLE: ***Apprenticeship Training Outline and Standards.***

DATE: 1985.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: This includes training standards, course objectives, and instructors notes and references. Recommended for use in conjunction with full National Association of Plumbing-Heating-Cooling Contractors plumbing training manuals, but can be purchased separately.

FORMAT: Teaching Guide; Reference Material. 100p.

AVAILABILITY: Sale $15.00. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046. (703) 237-8100.

TITLE: ***Apprentice Workshop.***

DATE: 1984.

DEVELOPER: Honolulu Community College.

ANNOTATION: Includes *Apprentice Occupational Information Guide* and several handouts.

FORMAT: Reference Material. 57p.

AVAILABILITY: Loan 4 weeks. Western Curriculum Coordination Center, 1776 University Avenue, Wist Hall 216, Honolulu, HI 96822. (808) 948-6496.

TITLE: ***Assessing Students' Skills and Interests.***

DATE: 1986.

AUTHOR: Corwin, Luene, And Others.

DEVELOPER: National Alliance of Community and Technical Colleges, Columbus, OH.

ANNOTATION: This monograph addresses assessment of students entering two-year colleges. In her introduction to the monograph, Luene Corwin provides an overview of various assessment models in existence. Assessment systems currently in use are discussed in the following papers: "Assessment at Guilford Technical Community College," by Paula Garber; "Testing at the Meramec Campus of St. Louis Community College," by Jack J. Becherer; and "Florida's Statewide Mandate to Test New Students," by Luther B. Christofoli. Appendixes to the volume include a discussion of the assessment and placement program at St. Louis Community College at Meramec, a detailed description of the procedures and instruments used in the entry assessment and placement system for college credit for students at Florida Community College at Jacksonville, and a list of member institutions of the National Alliance of Community and Technical Colleges. A list of selected readings is also included.

FORMAT: Monograph. 57p.

AVAILABILITY: For a microfiche copy of this document order ED275845 from FEIS.

TITLE **Assisting Students in Accessing Apprenticeship Programs: A Guide for the Apprenticeship School Linkage Program.**

DATE 1983

DEVELOPER Maryland State Department of Education, Baltimore. Div. of Instruction.

ANNOTATION This guide is intended to assist professionals in helping students explore apprenticeship as one alternative for entry into the work force. Additionally, it provides the processes for acquiring and registering in an apprenticeship program. The introduction focuses on the Apprenticeship-School Linkage Project, benefits for students, schools, and employers, and objectives of the Maryland Project. Guidelines for the Maryland Apprenticeship System follow. Requirements for entrance into an apprenticeship program are also listed. Eight steps are then described that are a suggested sequence in the guidance/career decision-making process leading to an apprenticeship program placement for individual students. This information for students is provided: what to expect, how apprenticeship programs operate, student responsibilities, and what an apprenticeship can do. The components of the apprenticeship agreement are then discussed, followed by some guidance questions and answers. Concluding the guide are a bibliography and these appendixes: a glossary; addresses of local, state, and federal resources; a list of apprenticeable occupations; sample forms; and a list of references.

FORMAT Guide, 72p.

AVAILABILITY For a microfiche copy of this document order ED241765 from FEIS.

TITLE **Barriers to Linkage of Vocational Education and Apprenticeship Programs: A Factor Analytic Study.**

DATE 1983

AUTHOR Thomas, Hollie B.

DEVELOPER State Univ. System of Florida, Tallahassee.

ANNOTATION A study was designed to identify the underlying dimensions of the barriers and facilitators to the linkage of vocational education and registered apprenticeship programs. It was anticipated that knowledge of the factors derived from identified barriers and facilitators would provide assistance in the development of models designed to establish collaborative arrangements between the two agencies. Participants were involved at two points—as interviewees to identify potential barriers and facilitators to linkage and as respondents to a barriers and facilitators survey developed from interview results. Data were obtained from 46 vocational educators and apprenticeship personnel in the structured interviews and 288 on the survey. A factor analysis resulted in the identification of five orthogonally rotated factors. Comparison of these factors with hypothesized groupings showed considerable accuracy. The factors identified were labeled (1) apprenticeship selection process, (2) inadequacies of vocational education as preparation for apprenticeship training, (3) awareness of the functions of the other agency, (4) communication within and between agencies, and (5) deterrents created by the factors. Twenty-one pages of tables are provided.

FORMAT Research Report, 53p.

AVAILABILITY For a microfiche copy of this document order ED239069 from FEIS.

TITLE **Carpentry Specialist.**

DATE 1986.

DEVELOPER Air Force Training Command, Sheppard AFB, Tex.

ANNOTATION This instructional package is intended for use in training Air Force personnel enrolled in a program for apprentice carpenters. Training includes an introduction to carpentry and provides instruction in the use of carpentry hand, portable power, and shop tools; construction and maintenance of wood structures; installation of building hardware; and erection of prefabricated buildings. Military training is also provided for end-of-course appointments, predeparture safety briefing, and physical conditioning. The package contains a set of lesson plans, five study guides, and five workbooks. Included in each lesson plan are a course content outline, lists of pertinent student instructional materials, approximate times to complete each phase of the course, suggested teaching methods, and instructional guidance. The study guides consist of series of instructional units, each of which contains an objective, an introduction, instructional text, and questions. Numerous figures and diagrams illustrate the text. The accompanying workbooks include objectives, lists of needed equipment, instructions for performing various tasks, and written exercises. A list of directed study assignments is also included.

FORMAT Teacher Guide; Student Guide/Workbook; 607p.

AVAILABILITY For a microfiche copy of this document order ED272751 from FEIS.

TITLE **The CCRI Electric Boat Program: A Partnership for Progress in Economic Development.**

DATE 1986.

AUTHOR Liston, Edward J.

ANNOTATION The Community College of Rhode Island (CCRI) has made a strong commitment to building partnerships with business and industry. CCRI's first customized training program was developed in 1982 with the National Tooling and Machine Association (NTMA) and was designed to enable apprentice machinists to receive the classroom training required to earn a journeyman's certificate while simultaneously earning credit toward an associate in applied science degree. Following the success of the CCRI/NTMA program, the college entered into agreements to develop programs with other major Rhode Island Companies, including General Dynamics Corporation's Electric Boat Division. The more than 100 students enrolled in the CCRI/Electric Boat Program work as apprentice welders, shipfitters, machinists, pipefitters, marine assembly machinists, and sheet metal mechanics while receiving classroom training required for the apprenticeship and earning credit toward an associate degree. For the most part, the employees' needs did not fit into existing CCRI degree programs. To remedy this, the college requested and received approval for a new degree program for an Associate in Applied Science in

Technical Studies (AASTS). The AASTS allows students to earn an associate degree in 3 years without being limited to concentrating on predetermined technical fields. Students attend some classes at the CCRI campus and others at the company facility, with the company paying full tuition and the cost of books and supplies.

FORMAT: Descriptive Report, 9p.

AVAILABILITY: For a microfiche copy of this document order ED275373 from FEIS.

TITLE: ***Chain Saw Maintenance and Repair.***

DATE: 1986.

ANNOTATION: *Chain Saw Maintenance and Repair* is designed as a laboratory manual. The materials are well illustrated, easy to read, and detailed in a step-by-step procedure. These materials are written for Adult Education-Vocational Education programs. Each unit will help you train for entry-level apprenticeship programs, upgrade your skills, or learn about your chain saw.

FORMAT: Teaching Guide, Workbook, Competency-based, Task Analysis, Criterion-referenced Evaluation, Individualized, Self-paced, Programmed Instruction, Field-tested/Validated, Illustrated, 261p.

AVAILABILITY: Sale. Contact for current price. Instructional Materials Laboratory, Director, University of Missouri, 10 Industrial Education Building, Columbia, MO 65211. (314) 882-2883.

TITLE: ***Community Colleges and Apprenticeship Training: A Winning Partnership.***

DATE: 1986.

AUTHOR: Renz, Frank; Styer, Michael.

ANNOTATION: In 1984, a partnership was developed between San Juan College (SJC) and the Public Service Company of New Mexico's (PNM) San Juan Generating Plant. An agreement was reached to promote training through a planned educational experience in which SJC awarded credit for courses taught by PNM training personnel. The program began in response to the need for an industrial instrumentation program that would meet PNM's needs and proved so successful it was expanded into apprenticeship programs in eight crafts. This expansion involved the development of curricula for each craft, the establishment of associate of applied science degree programs, the preparation of an informational handbook, job training sheets, class/work schedules, and progress/status sheets; and the establishment of policies and procedures. In light of the success of this partnership program, in 1985 SJC entered into a partnership with the Arizona Public Service Company to provide training for apprentices in the electrical, instrumentation, and machinist crafts and established an Industrial Management program at PNM to serve blue collar as well as low and mid-management employees. SJC is continuing the development of its partnerships, looking at clerical positions, security guards, management, and child care as possible areas for future program development.

FORMAT: Descriptive Report, 190p.

AVAILABILITY: For a microfiche copy of this document order ED273347 from FEIS.

TITLE: ***A Cooperative Vocational Education Teacher-Coordinator's Guide to Apprentice Training.***

DATE: 1983.

ANNOTATION: This guide is designed to help cooperative vocational education teachers-coordinators in New Jersey to understand the apprentice training opportunities open to their students. Covered first are the history of apprenticeship and an overview of apprenticeship today. Next, strategies are presented for linking apprentice training to cooperative vocational education. Outlined next are the following steps in assisting students with apprenticeship registration: identifying potential candidates, matching students and programs, reinforcing the apprenticeship option, determining commitment to apprenticeship, initiating a formal apprenticeship registration agreement, and expediting the processing of an apprenticeship agreement. The final chapter of the guide deals with various individuals and agencies to assist apprentices, including high school guidance counselors, apprentice coordinator offices, the Bureau of Apprenticeship and Training (BAT), the Division of Vocational Education, the New Jersey Job Service, local labor unions and trade associations, and publications. Appended to the guide are a student profile, a list of occupations recognized as apprenticeable by the BAT, certificates of approval for apprentice training and completion of apprenticeship, and an apprentice registration card.

FORMAT: Teacher Guide, 65p.

AVAILABILITY: For a microfiche copy of this document order ED233210 from FEIS.

TITLE: ***Curriculum Revision—Electrical Meterman and Station Wireman Apprentice. Final Report.***

DATE: 1986.

DEVELOPER: Oregon State Dept. of Education, Salem.

ANNOTATION: This report describes a project to revise curriculum for the apprenticeship and other training programs preparing students for journeyman status in the electrical meter worker and station wirer trades. Products were a lineworker course information guide and revised copies of the electrical theory course for electrical meter worker and station wirer apprentices, an answer book for the electrical theory course, and electrical power station theory course. This final report also provides task listings for the three years of lineworkers apprenticeship training. Jobs, tasks, descriptions, and recommendations for method of instruction/introduction—school instruction, on-the-job instruction, and/or on-the-job training—are charted.

FORMAT: Descriptive Report, 17p.

AVAILABILITY: For a microfiche copy of this document order ED269644 from FEIS.

TITLE: ***Drywall Finishing Manual.***

DATE: 1983.

AUTHOR: Lengert, Gerry.

ANNOTATION: This manual, a self-study guide for apprentices in the drywall finishing trade in British Columbia, attempts to establish standards for the trade. It tells how to produce a properly taped and filled drywall surface and describes

what that surface should look like. The standards emphasize quality work that can be realistically achieved on the job. Wherever possible the manual divides aspects of drywall finishing into step-by-step procedures. Safe, efficient use of the body in performing finishing tasks is stressed in the procedures. Besides procedures, the manual also deals with knowledge related to drywall finishing. The manual consists of 11 modules covering the following topics: filling compounds, safety, applying bead, taping and wiping tapes, filling, texturing, repairs and corrections, factors affecting drywall finishing, working efficiently, maintenance of tools and machines, and estimating. Each module contains an introduction that describes the contents of the module, an information section illustrated with tables, line drawings, and photographs, a summary, and exercises. An answer key completes the manual.

FORMAT: Student Guide/Workbook, 265p.

AVAILABILITY: For a microfiche copy of this document order ED246302 from FEIS.

TITLE: ***An Exploratory Study of Vocational Education Enrollment and Apprenticeship. Final Report.***

DATE: 1982.

AUTHOR: Driscoll, Eleanor, And Others.

DEVELOPER: Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.

ANNOTATION: A study identified, measured, and evaluated factors that determined students' entrance into and progress within apprentice training programs, and made policy recommendations pertaining to linkages between vocational education and apprenticeship programs. Three different methods of assessment were used in the study. The primary instrument was a 25-item apprenticeship survey that was completed by 628 first-year apprentices—320 carpenters, 265 machinists, and 43 auto mechanics. It contained questions regarding the apprentices' personal and educational background, trade-related experiences, and sources of information on apprenticeship. In addition, telephone interviews were conducted with 49 of the original 628 respondents, and personal interviews were conducted with 21 employers who employed one of the apprentices interviewed by phone. Topics covered in the phone interviews included respondents' motivations for becoming apprentices as well as their evaluations of their high school experiences. While the employer interview focused mainly on ratings of individual apprentices, it also included questions concerning apprentices in general. Based on data from the three instruments, researchers made 17 recommendations pertaining to topics such as steps students can take to gain entrance into apprenticeship programs and the educational needs of students planning to become apprentices.

FORMAT: Research Report, 224p.

AVAILABILITY: For a microfiche copy of this document order ED226120 from FEIS.

TITLE: ***Keynote Address Honoring Apprentices at the Tool and Die Institute's Annual Completion Ceremonies (30th, Arlington Heights, Illinois, May 31, 1985).***

DATE: 1985.

AUTHOR: Worthington, Robert M.

ANNOTATION: Despite the recent emphasis on teaching the basic skills at the high school level, educators must not forget that vocational education, and apprenticeship training in particular, remains as important as ever to the economic development of the nation. To meet the mandate for linkages and collaboration that appears in the Carl D. Perkins Vocational Education Act of 1984, the Department of Education (DOE) has taken the following steps: (1) formulation of an interagency agreement with the Department of Labor to coordinate apprenticeship training and vocational education activities, (2) development of collaborative linkages with the Department of Defense to ensure that the U.S. civilian labor force has the skills needed by defense-related industries, (3) provision of funds for a project, entitled the Precision Metalworking Skills Project, to enhance the skills and qualifications of persons entering skilled trades in the area of precision metalworking and to encourage students to consider a career in that field (in which a trade shortage of 238,000 workers over the next five years is projected), (4) establishment of awards to identify outstanding vocational education programs, and (5) organization of the Business-Higher Education Forum to encourage cooperation and collaboration among representatives of the business and academic communities in the United States.

FORMAT: Opinion Paper, 11p.

AVAILABILITY: For a microfiche copy of this document order ED260252 from FEIS.

TITLE: ***Linkage between Vocationally Trained Participants and Industry Registered Apprenticeship Programs. An Implementation Manual.***

DATE: 1983.

AUTHOR: Thomas, Hollie B., And Others.

DEVELOPER: Florida State Dept. of Labor and Employment Security, Tallahassee.

ANNOTATION: This manual was developed to provide assistance to persons in registered apprenticeships and vocational education who wish to form a link between these two institutions. It offers a procedure that can be adapted to meet local conditions. The major sections of the manual define linkage, describe when linkage is likely to occur, list the possible benefits, enumerate the conditions that facilitate linkage, describe how to develop a linkage plan, provide suggestions on how to implement linkage plans, and describe an evaluation process. (This structure was selected for the manual so that those considering entering into a linkage agreement could establish what they deem are necessary ingredients for a linkage plan, as well as weigh the possible costs and benefits of entering into such an agreement before making initial contacts with the agency with which linkage is proposed.) In addition, the manual provides assistance in making important first contacts so that the conditions that facilitate linkage can be maximized. Pro-

cedures for determination of the content of the linkage agreement and the development of the process to accomplish the activities also are provided. Finally, suggestions about how to carry out and evaluate the planned activities are provided. Sample forms for a linkage arrangement are offered in appendixes to the manual.

FORMAT: Teacher Guide, 65p.

AVAILABILITY: For a microfiche copy of this document order ED273846 from FEIS.

TITLE: ***Masonry Specialist.***

DATE: 1983.

DEVELOPER: Air Force Training Command, Sheppard AFB, Tex.

ANNOTATION: This instructional package is intended for use in training Air Force personnel enrolled in a program for apprentice masons. Training includes an introduction to masonry and provides instruction in the use of masons' hand, portable power, and shop tools; construction and maintenance of masonry structures using brick, concrete block, and tile; preparation of concrete, mortar, and plaster mixes; placement of reinforcement steel; placement and finishing of concrete; and plaster, stucco, and tile. Military training is also provided for end-of-course appointments, predeparture safety briefing, and physical conditioning. The package contains a set of lesson plans, three study guides, and three workbooks. Included in each lesson plan are a course content outline, lists of pertinent student instructional materials, approximate times to complete each phase of the course, suggested teaching methods, and instructional guidance. The study guides consist of series of instructional units, each of which contains an objective, an introduction, instructional text, and questions. Numerous figures and diagrams illustrate the text. The accompanying workbooks include objectives, lists of needed equipment, instructions for performing various tasks, and written exercises.

FORMAT: Teacher Guide, Student Guide/Workbook, 377p.

AVAILABILITY: For a microfiche copy of this document order ED272750 from FEIS.

TITLE: ***Meatcutter Testbook.***

DATE: 1982.

DEVELOPER: California Dept. of Education.

ANNOTATION: Contains objective tests for each topic in the *Meatcutting Workbook*, which is designed for apprenticeship meatcutting programs. Thirty tests consist of 5 to 65 multiple-choice items, usually 10.

FORMAT: Teaching Guide, Evaluation Instrument, 163p.

AVAILABILITY: Loan 4 weeks, Western Curriculum Coordination Center, 1776 University Avenue, Wist 216, Honolulu, HI 96822, (808) 948-6496. For a microfiche copy of this document order ED219593 from FEIS.

TITLE: ***Meatcutting Workbook.***

DATE: 1982.

DEVELOPER: California Dept. of Education.

ANNOTATION: A workbook for apprentices learning the meatcutting trade. It is divided into 8 units, covering 38 topics. Each topic provides an introductory question section, informative material, study assignment, study guide, a list of recommended instructional materials, and a glossary.

FORMAT: Workbook, 288p.

AVAILABILITY: Loan 4 weeks, Western Curriculum Coordination Center, 1776 University Avenue, Wist 216, Honolulu, HI 96822, (808) 948-6496. For a microfiche copy of this document order ED219594 from FEIS.

TITLE: ***NAPHCC Apprentice Training—First Year Lesson Plans.***

DATE: 1984.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains simple mathematics, the science of plumbing waste disposal, pipe fittings analysis, first aid training, Occupational Safety-Health Administration (OSHA), OSHA training, fixtures, fittings and valves, and basic mechanical drawing. Recommended for use in conjunction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Teaching Guide, Evaluation Instrument, 347p.

AVAILABILITY: Sale $125.00, NAPHCC Members, Instructor, State and Federal Government Personnel, Educational Institutions; $200.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Apprentice Training—Fourth Year Lesson Plans.***

DATE: 1987.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains repair of fixtures and fittings, pumps, indirect wastes, cross-connection control devices, basic heating systems, material takeoff, and plumbing code. Recommended for use in conjunction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Teaching Guide, Evaluation Instrument, Illustrated, 200p.

AVAILABILITY: Sale $125.00, NAPHCC Members, Instructor, State and Federal Government Personnel, Educational Institutions; $200.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Apprentice Training—Second Year Lesson Plans.***

DATE: 1985.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains water distribution systems, mathematics, offsets and formulas, drain, waste and vent systems, rough-in sheets, welding basics, related science, rigging and hoisting. Recommended for use in conjunc-

tion with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Teaching Guide; Evaluation Instrument; Illustrated; 600p.

AVAILABILITY: Sale $125.00, NAPHCC Members; Instructor, State and Federal Government Personnel, Educational Institutions; $200.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Apprentice Training—Third Year Lesson Plans.***

DATE: 1986.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains theory of operation and installation of residential, commercial, industrial and institutional fixtures, fittings, appliances and appurtenances, gas piping and appliance venting, corrosion control, levels and transits, offset calculations, heat transfer, basic electricity and blueprint analysis. Recommended for use in conjunction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Teaching Guide; Evaluation Instrument; 590p.

AVAILABILITY: Sale $125.00, NAPHCC Members; Instructor, State and Federal Government Personnel, Educational Institutions; $200.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Plumbing Apprentice Student Workbook— First Year.***

DATE: 1984.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains worksheets on simple mathematics, the science of plumbing waste disposal, pipe fittings, analysis, first aid training, OSHA. Recommended for use in conjunction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Evaluation Instrument; Workbook; Individualized; Self-paced; Illustrated; 230p.

AVAILABILITY: Sale $35.00, NAPHCC Members; Instructor, State and Federal Government Personnel, Educational Institutions; $50.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Plumbing Apprentice Student Workbook—Fourth Year.***

DATE: 1987.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains worksheets on repair of fixtures and fittings, pumps, indirect waste, cross-connection control devices, basic heating systems, material takeoff, and plumbing codes. Recommended for use in conjunction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Evaluation Instrument; Workbook; Individualized; Self-paced; Illustrated.

AVAILABILITY: Sale $35.00, NAPHCC Members; Instructor, State and Federal Government Personnel, Educational Institutions; $50.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Plumbing Apprentice Student Workbook—Third Year.***

DATE: 1986.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains worksheets on theory of operation and installation of residential, commercial, industrial, and institutional fixtures; fittings; appliances and appurtenances; gas piping and appliance venting; corrosion control; levels and transits; offset calculations; heat transfer; basic electricity; and blueprint analysis. Recommended for use in conjuction with full NAPHCC training manuals, but can be purchased separately.

FORMAT: Evaluation Instrument; Workbook; Individualized; Self-paced; 443p.

AVAILABILITY: Sale $35.00, NAPHCC Members; Instructor, State and Federal Government Personnel, Educational Institutions; $50.00, Others. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***NAPHCC Plumbing Apprentice Training Home Study Course.***

DATE: 1987.

DEVELOPER: National Association of Plumbing-Heating-Cooling Contractors.

ANNOTATION: Contains apprenticeship training course for students who cannot reach a training center. The program is administrated through the national office and features complete year-long lesson plans for students to follow. Tests will be sent out to the students, graded at the national office and sent back to the students. Certificates will be awarded at year-end and at course completion. Also includes the *American Society of Sanitary Engineers Plumbing Dictionary* and the *American Red Cross Standard First Aid, Personal Safety*.

FORMAT: Reference Material; Textbook; Evaluation Instrument; Workbook; Illustrated; 423p.

AVAILABILITY: Sale $500.00, NAPHCC Members; $700.00, Non-members. National Association of Plumbing-Heating-Cooling Contractors, 180 South Washington Street, P.O. Box 6808, Falls Church, VA 22046, (703) 237-8100.

TITLE: ***National Apprenticeship and Training Standards for Drafters. Revised.***

DATE: 1982.

DEVELOPER: Employment and Training Administration (DOL), Washington, D.C. Bureau of Apprenticeship and Training.

ANNOTATION: These revised national standards are designed to assist local unions in establishing local apprenticeship and training programs.

for drafters. Covered in the individual sections are the following topics: provisions of the apprenticeship standards for drafters (definitions, qualifications for application, the selection of applicants, credit for previous experience and education, the terms of apprenticeship, apprenticeship agreements, supervision, probationary periods, hours of work, salaries, examinations, related instruction, ratios of apprentices to journeymen, work experience, management and labor relations, and equal opportunity); supervision of the program (local joint apprenticeship and training committees, responsibilities of apprentices, committee consultants, recognition of completion of apprenticeship, filing with registration agencies, safety and health, and modification of standards); and federal laws and regulations affecting the employment of apprentices. The appendixes contain schedules of recommended work processes and related technical instruction for manufacturing, marine, and architectural drafters.

FORMAT: General Guide, 27p.

AVAILABILITY: For a microfiche copy of this document order ED230724 from FEIS.

TITLE: ***National Apprenticeship and Training Standards for the Sheet Metal Industry. Revised.***

DATE: 1982.

DEVELOPER: Employment and Training Administration (DOL), Washington, D.C. Bureau of Apprenticeship and Training.

ANNOTATION: These national standards are designed to aid contractors, labor, and joint committees in setting up, conducting, and improving apprenticeship programs for individuals seeking to become skilled in the sheet metal industry. Covered in the individual sections are the following topics: the provisions of the apprenticeship standards (definitions, qualifications for apprenticeship, the selection of apprentices, apprentice obligations, the term of apprenticeship, work experience, a suggested schedule of work processes for sheet metal apprenticeship, related instruction, the minimum recommended curriculum, examinations, apprentice working hours, wages, the duties of local joint committees, continuity of employment, amendments to local standards, the relationship of standards to bargaining agreements, and the expenses incurred in administrating the standards); federal laws and regulations affecting the employment of apprentices; joint training funds; and rules and regulations governing local joint apprenticeship committees. Appendixes to the standards include recommendations for the selection and admission of apprentices, an outline of an affirmative action program, and sample forms.

FORMAT: General Guide, 37p.

AVAILABILITY: For a microfiche copy of this document order ED230723 from FEIS.

TITLE: ***National Apprenticeship Standards for Cement Masonry, Asphalt, and Composition Trade. Revised.***

DATE: 1976.

DEVELOPER: Employment and Training Administration (DOL), Washington, D.C. Bureau of Apprenticeship and Training.

ANNOTATION: These national standards are designed to guide local joint apprenticeship and training committees in establishing local apprenticeship programs to train individuals seeking to become skilled in the cement masonry, asphalt, and composition trade. Covered in the individual sections are the following topics: provisions of the apprenticeship standards (definitions, duties of the local joint committee, qualifications for apprenticeship, terms of apprenticeship and related instruction, apprenticeship agreements, ratios of apprentices to journeymen, apprentice wages, credit for previous experience, apprentice coordinators, employer responsibilities to apprentices, responsibilities of apprentices, hours of work, accident prevention, adjusting differences, and certificates of completion); joint training funds; and federal laws and regulations affecting the employment of apprentices. Appendixes to the guide contain a work experience and training schedule, sources of related instructional materials, forms for use in apprenticeship record keeping, sample apprenticeship agreements, addresses of regional offices of the Bureau of Apprenticeship and Training, and a list of state and territorial apprenticeship agencies.

FORMAT: General Guide, 32p.

AVAILABILITY: For a microfiche copy of this document order ED230725 from FEIS.

TITLE: ***Oregon Cabinetmakers and Woodworkers Apprenticeship Training Curriculum, Instructor's Manual.***

DATE: 1985.

AUTHOR: Guilar, Joshua R. D.

ANNOTATION: This guide is intended for use in providing the classroom portion of training for apprentices in the cabinetmaking and millwork trades. The materials focus on guiding teams of apprentices through the completion of a credenza with step-back hutch that is to be made in the traditional, colonial/country, and contemporary furniture styles. The guide is divided into 12 units. There is one unit for each of the following topics: power hand tools, hand tools, machinery, and finishing. The following topics are covered in two units each: materials, planning processes, machine processes, and assembly. Each unit contains some or all of the following: a unit outline; list of supplemental reading materials; term notes; a series of class outlines, each of which includes a lecture/demonstration outline, parallel listing of tasks and project steps, and notes to the instructor. The curriculum is holistic in that apprentices may join at any time during the four-year cycle, and it is designed to stress the need for cooperation among apprentices and the concept that, in the workplace, the outcome of teamwork is productivity.

FORMAT: Teacher Guide, 141p.

AVAILABILITY: For a microfiche copy of this document order ED275830 from FEIS.

TITLE: ***Organized Labor Education and Training Programs.* Information Series No. 286.**

DATE: 1984.

AUTHOR: MacKenzie, John R.

DEVELOPER: National Inst. of Education (ED), Washington, D.C.

ANNOTATION: This paper examines the role of organized labor in the United States in providing training and education for union members. The first section clarifies the purpose of the union as an institution by examining its roles, functions, characteristics, and legal frameworks. Domestic and international competition affecting unions and their relationship to business and industry are discussed. Labor education and training sponsored by trade unions are the main topics of the second section. The role of unions in providing apprenticeship training is described, emphasizing the importance of training trust funds for apprentices. Labor education is the training of union officers and members to fulfill their functions within the union and the larger society. In the third section, the role of educational institutions in providing labor education is outlined, delineating three stages of development of university labor education programs. The emerging role of community colleges is acknowledged. Four types of tuition aid programs are the subject of the fourth section: tuition advancement or reimbursement, educational leave, training funds, and scholarships and educational loans. This section includes information about barriers to worker participation and ways to overcome them. Case studies describing educational programs sponsored by unions conclude the monograph, illustrating the diversity of educational and training opportunities available to union members.

FORMAT: Research Report, 53p.

AVAILABILITY: For a microfiche copy of this document order ED248387 from FEIS.

TITLE: ***Organized Labor's Linkage with Vocational Education. Occasional Paper No. 110.***

DATE: 1986.

AUTHOR: Shields, Dorothy.

ANNOTATION: Organized labor's relationship to vocational education has always been one of wholehearted support and encouragement. Since the passage of the Smith-Hughes Act in 1917, the American Federation of Labor (AFL) has supported state efforts to develop vocational education. Labor has strongly supported apprenticeship programs that included cooperative relationships among the schools, employers, unions, and equipment manufacturers. Recognizing the dependence of vocational education upon its relationships with organized labor, the American Vocational Association created its Labor-Management Relations Committee in 1954. Since that time, various unions have worked to improve vocational education dealing with their particular trade, and the AFL-CIO has vigorously opposed proposed cutbacks in funding for vocational education. Historically, the AFL-CIO has urged that vocational education students receive a comprehensive education with emphasis on basic skills education rather than on a program that is too job specific. Despite labor's continued support of vocational education, the incorporation of instructional materials dealing with labor into vocational programs is the exception rather than the rule. Continued strengthening of the partnership between vocational education and organized labor is vital in light of the current need to retool and to retrain the work force in the United States, and government leadership is essential to achieve this goal.

FORMAT: Information Analyses, 23p.

AVAILABILITY: For a microfiche copy of this document order ED267270 from FEIS.

TITLE: ***Oversight Hearings on the National Apprenticeship Training Act. Hearings before the Subcommittee on Employment Opportunities of the Committee on Education and Labor, House of Representatives, Ninety-Eighth Congress, First Session (November 15, 17, 1983).***

DATE: 1983.

DEVELOPER: Congress of the U.S., Washington, D.C. House Committee on Education and Labor.

ANNOTATION: This document contains two congressional hearings on the present apprenticeship programs to determine whether they are effective in producing the needed skilled craftspersons. The hearings also focus on how the apprenticeship training systems may be improved to meet the everchanging needs of industry. Testimony includes statements, prepared statements, letters, and supplemental materials from United States representatives and individuals representing the National Tooling and Machining Association; National Association of Government Labor Officials; Metal Trades Department, AFL-CIO; Center for the Study of Human Resources, University of Texas at Austin; National Association of State and Territorial Apprenticeship Directors; Outreach Program, International Association of Bridge, Structural, and Ornamental Iron Workers; Goodyear Tire and Rubber Co.; Norfolk Shipbuilding and Drydock Corp.; National Joint Apprenticeship and Training Committee of the Electrical Contractors Association; Joint Apprenticeship Committee, AFL-CIO; National Education Committee, Associated Builders and Contractors; National Women's Law Center; American Vocational Association; departments of labor of various states; public school systems; the United States Department of Labor; and union locals.

FORMAT: Legal/Legislative/Regulatory Material, 417p.

AVAILABILITY: For a microfiche copy of this document order ED246279 from FEIS.

TITLE: ***Public Sector Opportunities and Linkages with Vocational Education.***

DATE: 1985.

AUTHOR: Worthington, Robert M.

ANNOTATION: The Carl D. Perkins Vocational Education Act reaffirms, expands, and strengthens the federal commitment to quality vocational programs. As stated in the Act, vocational education programs are best administered by states and their communities; the federal government is a junior partner with a catalytic role. The law has two major purposes: to improve the quality of vocational education programs and to make vocational education programs accessible to all people. Five titles cover assistance to the states, basic grants, special programs, national programs, and definitions. The State Board of Vocational Education is the sole state agency responsible for administration and distribution of federal funds. The State Council on Vocational Education advises the State Board on

the State Plan and reports to the governor, business community, and general public. The apprenticeship provisions of the Act offer some important linkage opportunities with the home building industry. This legislation supports an even stronger alliance among vocational education, apprenticeship, and private industry. Specific key citations in the Act that offer meaningful opportunities for the home building industry include those on institutional and work site programs, building more effective linkages between education and private sector employers, and related instruction for apprentices.

FORMAT: Opinion Papers, 23p.

AVAILABILITY: For a microfiche copy of this document order ED262227 from FEIS.

TITLE: ***School to Work Linkage—The Apprenticeship Connection.***

DATE: 1985.

AUTHOR: Pfeiffer, E. W.

ANNOTATION: School-to-work linkage refers to the concept of apprenticeship that begins in secondary school. It is an approach to education and training that allows high school seniors to be registered as apprentices with the U.S. Bureau of Apprenticeship and Training while completing their secondary school education. Senior high school students are employed part-time as registered apprentices by local employers and continue as full-time apprentices once they have graduated (in contrast to cooperative vocational education, in which students are full-time students and part-time employees). The apprenticeship-cooperative education linkage concept involves the employment of in-school youth in registered, apprenticeable trades and a direct transition from part-time to full-time apprenticeship employment. The concept of apprenticeship-school linkage represents New Jersey's attempt to bridge the gap between apprenticeship and cooperative education. The concept addresses both the issues of school-to-work transition and high youth unemployment. While the concept of improving the school-to-work transition is not new, the apprenticeship-cooperative education linkage is unique in that it combines the apprenticeship system of training with the secondary school cooperative education curricula. (Guidelines for the New Jersey program are contained in this paper.)

FORMAT: Descriptive Report, 9p.

AVAILABILITY: For a microfiche copy of this document order ED267174 from FEIS.

TITLE: ***"Today's Apprentices, Tomorrow's Leaders."***

AUTHOR: Tuholski, Robert J.

JOURNAL: *VocEd*; v57 n7 p37-38 Oct 1982.

ANNOTATION: Describes an innovative three-year apprenticeship training program in metalcutting tool operation, which combines a certification program from the company with an associate in arts degree in applied technology (industrial engineering) from a community college. The combination of hands-on training with theoretical training is explained.

TITLE: ***Training and Career Opportunities for School-Leavers before Standard Ten. Report MM-97. Revised Edition.*** **HSRC Guidance Series GS-3.**

DATE: 1984.

AUTHOR: Coetzee, C. J. S., And Others.

ANNOTATION: Intended for early school-leavers of all population groups in South Africa, this publication provides basic information on post-school pre-tertiary training. (This training is outside the normal school context and before a Standard Ten or senior secondary school level has been obtained.) Chapter I describes training institutions and schemes and functions of the Department of Manpower. Chapter II provides an overview of apprenticeship training leading to artisan status. Training opportunities at the tertiary level are briefly addressed. Listings follow of designated and non-designated trades. (Designated trades are specified by the Minister of Manpower on recommendation of a manpower training committee.) Requirements, period of apprenticeship, and sources for further information are cited. Chapters III and IV provide information on careers in public service (including careers in government departments, South African Transport Services, postal service, South African Defense Force) and in other career fields (clerical, mining, operators, processing and/or manufacturing, sales and related careers, service). Requirements, training, and types of vocational service are described for each career. Chapter V discusses post-school pre-tertiary courses structured and controlled by the Department of National Education. Following an index of careers, an appendix provides addresses of useful organizations and contacts.

FORMAT: Research Report, 170p.

AVAILABILITY: For a microfiche copy of this document order ED251673 from FEIS.

TITLE: ***University of Hawaii Community Colleges: A Guide for Apprenticeship Coordinators and Administrators.***

DATE: 1983.

DEVELOPER: Department of Education, Washington, D.C.

ANNOTATION: This guide presents materials prepared for college administrators of the related instruction portion of apprenticeship training programs in the University of Hawaii's community colleges. After a glossary of relevant terms is presented, introductory material defines apprenticeship, delineates the advantages of apprenticeship to the employer and apprentice, and presents regulations governing the classification of apprentices. The following sections list the federal and state organizations concerned with apprenticeship and the criteria of apprenticeable occupations. Next, a list of apprenticeable occupations in the state of Hawaii provides information on customary terms of apprenticeship. The final sections then outline information on apprenticeship programs and requirements including a classification of programs, the apprenticeship agreement and standards, the role of the apprenticeship coordinator within programs, and the procedure for the establishment of related instruction programs. Appendixes include standards of apprenticeship regulations; a sample apprenticeship agreement; federal and state laws, rules and regulations;

sample student forms; apprentice wage rates; apprentice wage schedule; a directory of trade coordinators; and selected references.

FORMAT: Guide, 47p.

AVAILABILITY: For a microfiche copy of this document order ED238498 from FEIS.

TITLE: ***Women and Apprenticeship in Hawaii: Opportunities in Nontraditional Occupations.***

DATE: 1985.

AUTHOR: Murray, Jeannette.

ANNOTATION: Apprenticeship training programs in Hawaii offer an effective means for men and women to attain skills necessary for productive work. Hawaii's two sources of apprenticeship training are the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations and Pearl Harbor Naval Shipyard (PHNS). Despite the efforts of these programs to change employment policies in compliance with federal regulations, only a limited number of women apprentices are in Hawaii's work force. To increase women's participation in apprenticeship, the Apprenticeship Division implemented recruitment practices at the secondary and postsecondary school levels and developed a series of promotional materials pertaining to women's participation in the programs. The PHNS has a federally funded apprenticeship program which, through the Federal Women's Program, organizes recruitment efforts such as career fairs, visits to high schools and community colleges, and information dissemination. In spite of these activities, in 1984 only 6.9 percent of the state-registered apprentices and in 1982 9.5 percent of the PHNS apprentices were women. Reasons for the lack of women in apprenticeship programs include a historic lack of exposure to certain kinds of nontraditional work; job stereotyping; the prestige associated with white collar or professional occupations; and the stigma attached to nontraditional undertakings. While the progress is slow in the transition from traditional to nontraditional work roles, the opportunities for increased pay, job security, and advancement accorded through the apprenticeship programs are being recognized by women who are not deterred by the demands of physical labor or stereotypical work attitudes.

FORMAT: Opinion Paper, 13p.

AVAILABILITY: For a microfiche copy of this document order ED270163 from FEIS.

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

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